INDIVIDUALIZED INTERVENTION FOR SOCIAL COMPETENCE

An Initial Evaluation

BARRY H. SCHNEIDER

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Abstract

Most social skills training programs are based on theoretical constructs that have not been fully validated with children. For example, increased assertiveness is a frequent target. However, it is not certain that assertive behaviour is associated with peer acceptance or effective social functioning during childhood. Social skills training programs are often conducted without taking into account the individual behavioural deficits of the subject. For example, many programs attempt to increase the rate of the child's interaction with peers. However, the rate of interaction of hyperactive children is at least as high as that of their non-hyperactive classmates, though these interactions are highly inappropriate in most cases. Therefore, the use of a social skills training program whose target is rate of interaction might even be harmful with this population.

The Individualized Intervention for Social Competence (IISC) program was designed to improve the social skills of children with behavioural and learning disorders. Its broad behavioural objectives cluster along the dimensions of aggression and withdrawal, since each of those dimensions constitute different reasons for peer rejection. Significant relations between peer ratings of likeability and these two behavioural dimensions have been established for our population and many others. The training procedures involved are specific to the identified skill deficits and needs of the individual subject. Subjects are divided into aggressive and withdrawn groups according to structured direct observation of their recess play. In addition, those requiring training in role-taking or identifying emotional expression are identified by informal testing. A twelve-week prescriptive program to remediate the specific social skills deficits identified is then implemented. Problem-solving, modeling and cognitive restructuring are the principal intervention techniques involved, supplemented by the use of role-playing, directed visual imagery and guided self-statements. Videotaped sequences demonstrating the target skills are used for modeling. The actors were children from regular elementary school classes whose popularity was verified by sociogram.

The IISC program was implemented and systematically evaluated with 41 emotionally disturbed children aged 7 through 13. Two half-hour sessions per week were conducted by male and female co-therapists with each group of three or four subjects. Subjects were randomly assigned (after blocking by aggression and withdrawal according to observation of recess play) to one of two groups: a treatment group and an attention control group (who received systematic relaxation training). Dependent measures were direct observations of recess play and teacher ratings (Stephens' Social Behavior Assessment). The teacher checklist was administered before and after treatment, and at a six-month follow-up. A categorization scheme developed at the Child Study Centre was used for the observations. Subjects were observed in random order for 20 two-minute samples before and after treatment. A five-seconds-on, five-seconds-off procedure was used. Inter-rater agreement for each of the 13 categories exceeded 86 per cent.

The overwhelming majority of the cognitive objectives for the intervention modules were achieved. The results indicate that the program is effective in reducing the frequency of aggressive behaviour, but not in alleviating difficulties of withdrawal. Implications for the further development of individualized social skills training are drawn.

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Introduction

This report describes the initial development of an individualized social skills training program for emotionally disturbed children. Following a brief theoretical rationale for the individualization of social skills training with this population, an analysis of the patterns of peer acceptance in a children's treatment centre is presented; this analysis guided the final selection of target skills for the training.

Chapter 3 is a capsule description of the Individualized Intervention for Social Competence (IISC) program as it has evolved to date. The results of the initial evaluation appear next. The report concludes with an outline of future development plans for the IISC program.

The IISC procedures have been implemented to date at the Child Study Centre of the University of Ottawa. The Centre is a children's treatment centre which serves 45 children aged 6 through 12. Approximately half of the children are in residential care; the remainder receive day treatment only. (Further description of our subjects appears in chapter 4.) Though the Centre's affiliation with the university and its favourable staff-student ratio make it a privileged place to conduct research, the IISC program was designed to meet the needs of other special schools and centres whose resources may be more limited.

This report describes only the initial phase of the ongoing development of the IISC program. The authors present this information as a preliminary, and will be pleased to inform potential users of the program of future modifications, applications and findings.

I

Individualized Social Skills Training: A Rationale

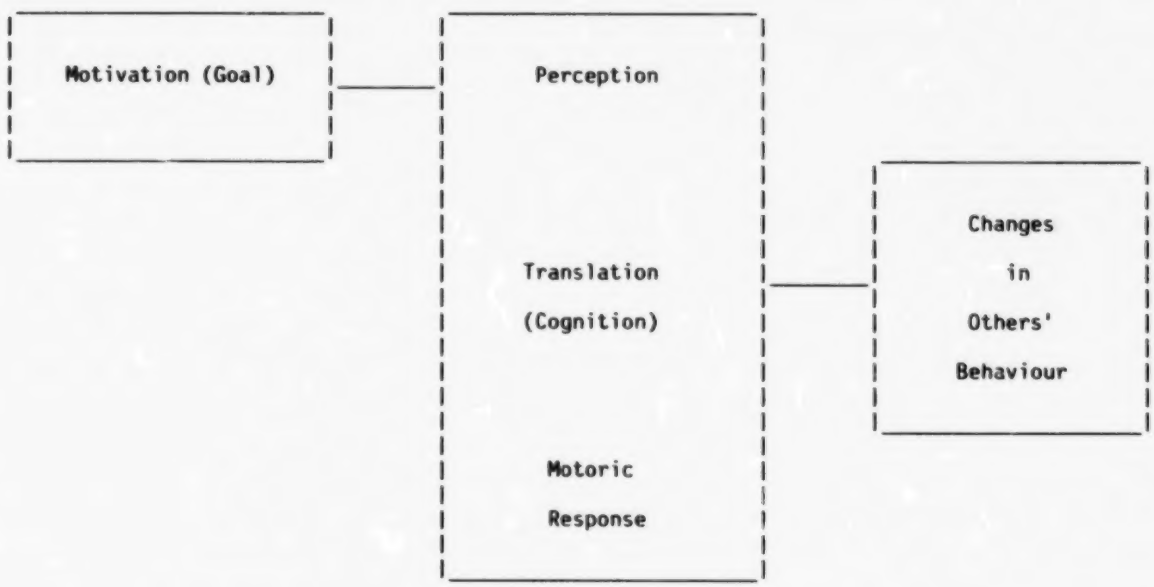
The terms "social skills" and "social competence" are used in the literature to describe many different interpersonal phenomena. The resulting confusion has been widely decried (Anderson and Messick 1974; Curran 1979). The two terms will be used interchangeably herein. They will refer to the child's ability to satisfy interpersonal needs in ways that are both effective and acceptable to society (this is an adaptation of Trower, Bryant and Argyle's [1978] definition of adult social skill). While mention will be made to previous research in both adult-child and child-peer interaction, this study will be restricted to skills associated with effective peer interaction; the specific skills involved are enumerated in detail below.

Interest in childhood social competence has been stimulated by the considerable longitudinal evidence that it is associated with adult mental health (Cowen, Pederson, Babijian, Izzo and Trost 1973; Kagan and Moss 1962; Northway 1944). Even in regular schools, loneliness and social isolation are widespread. In a sociometric study, Gronlund (1959) found that 6 per cent of children in grades three to six seemed to have no friends at all; a further 12 per cent have but one friend. Among exceptional children, poor social skills are associated with peer rejection (Bryan 1978; Morgan 1977; Quay 1978; Strain, Cooke and Apolloni 1976).

In planning this project, it was assumed that social competence is a complex, multidimensional ability involving social perception and social-cognitive skills as well as the overt social behaviour observable to others. The importance of perceptual and cognitive development in the emergence of effective social interaction is discussed by Piaget (Inhelder and Piaget 1964) and reaffirmed extensively within the social skills literature (Cartledge and Milburn 1980; Van Hasselt, Hersen, Whitehill and Bellack 1979). The integration of perception, cognition and motoric behaviour as components of social competence is probably best conceptualized in Trower, Bryant and Argyle's (1978) social skills model. This model is schematically represented in Figure 1, and will be used as a framework for introducing the component skills that social competence training programs attempt to develop.

Figure 1

SOCIAL SKILLS MODEL
(after Trower and Argyle)



As shown, the interaction process is energized by the individual's goals within the interpersonal context. The child may or may not be conscious of these goals, but an inherent motivation to interact with others is assumed. Other persons provide necessary guidelines for social interaction. These guidelines are expressed through both verbal and non-verbal language, and are often subtle. Therefore, effective social interaction depends, first of all, on one's ability to accurately perceive the verbal and visual messages sent by others (Izard 1971; Wiig and Semel 1976).

Certain cognitive capacities are needed in order to understand the message received and plan an appropriate response. One must realize that other people have different needs and feelings and see situations differently. "Role-taking" or "decentration skill" refers to the ability to simultaneously consider one's own view and that of others (Feffer and Suchotliff 1966). One must have an understanding of the general conventions, rules and norms of social interaction in order to evaluate the behaviour of others and plan one's own (Goldstein 1972).

In order to implement an appropriate response when confronted with a problematic social situation, one must recognize that the problem exists and understand its nature (Meichenbaum 1976). One must be aware that there are a number of possible responses. The ability to generate alternative solutions is discussed by Spivack and Shure (1974). They point out that the child must also be able to predict the consequences of each of the solutions contemplated (consequential thinking) and must know how to plan realistic action in order to implement the various solutions envisaged (means-end thinking).

The "motoric" skills involved in social competence are those behaviours visible to the observer -- essentially one's words and actions. The child must be sufficiently free from anxiety and inhibition to perform the appropriate response. The response must be part of the child's behavioural repertoire, i.e. he/she must know how to physically perform it. Rinn and Markle (1979) present a useful categorization of motoric social skills. They divide social skills into four behavioural repertoires: 1) self-expressive skills (expressing feelings and opinions, accepting compliments), 2) other-enhancing skills (agreeing with others, praising others), 3) assertive skills (making requests, disagreeing with the opinions of other people, denying unreasonable requests), and 4) communication skills (conversing, helping to solve interpersonal problems).

Selective Overview of Social Skills Training Programs for Children

A number of promising techniques have been developed to alleviate deficiencies in many of the component skills of social competence. Working largely with isolated or unaccepted children from regular classrooms and preschools, researchers have demonstrated the effectiveness of some of these techniques.

Methods for the correction of deficits in the visual perception of emotional facial expressions are contained in early literature on educational techniques for the learning

disabled (Johnson and Myklebust 1967). While less work has been done to correct deficiencies in the auditory reception of interpersonal communication, increasing attention is being paid to the social context of language, both receptive and expressive (Stark and Wallach 1980; Wiig and Semel 1976). A number of activities are suggested in the literature to help children perceive both verbal and non-verbal social stimuli more accurately; unfortunately, most of these techniques have not been subjected to empirical evaluation. In contrast, there has been considerable research on cognitive and problem-solving methods for promoting social competence. For example, role-taking, i.e. the ability to appreciate the perspective of others in a social situation, appears to be teachable to children both from regular schools and institutional settings. Having children act the roles of various characters in a hypothetical situation, discuss the feelings and motives of characters in stories, puppet plays and videotaped segments, and evaluate filmed sequences in which the child actors make obvious errors in role-taking are among the interventions which have proven effective (Chandler 1973; Chandler, Greenspan and Barenboim 1974; Iannotti 1978; Jaquette 1980).

Problem-solving techniques to promote social skills have been validated, for the most part, with preschoolers and children from regular classes. Spivack and Shure's (1974) program to promote social adjustment in nursery school and kindergarten settings stimulated considerable interest. This 46-session intervention focuses on alternative thinking, consequential thinking, and means-end thinking; earlier sessions review the linguistic prerequisites that are necessary to master these operations. Didactic instruction, including directed analysis of hypothetical story situations and systematic probing of the children's answers is the basic medium of presentation. There has been some success in extending this type of intervention into the upper grades of elementary school (McLure, Chinsky and Larcen 1978; Stone, Hinds and Schmidt 1975; Houtz and Feldhusen 1976). The value of getting children to verbally "rehearse" newly acquired social-cognitive skills was demonstrated by Camp (Camp and Bash 1978) and others (Gesten, de Apodaca, Rains, Weissberg and Cowen 1978).

Behaviourally-oriented researchers have successfully attempted direct instruction of some of the observable, "motoric" social skills enumerated by Rinn and Markle (1979). Exposure to models (usually on film) who display appropriate skills or increased social interaction seems effective in increasing the social interaction of isolated preschool children (O'Connor 1969; Keller and Carlson 1974). Recent studies have shown that short-term verbal "coaching" of specific target skills, usually in combination with role-play rehearsal and feedback, can be beneficial (Oden and Asher 1977; Ladd 1981).

Despite the promising results reported in the literature, a number of methodological difficulties suggest caution in the interpretation of the findings. Many of the studies are conducted with single subjects or small samples. Intervention procedures are not always well specified. Many of the dependent measures used have no data regarding reliability or relationship to social adjustment; the concordance between the outcome measures used is known to be poor. Frequently, there is no follow-up to determine the maintenance of improvement demonstrated. The tendency to use young children with mild difficulties of shyness or

isolation has been widely criticized -- and is a clear handicap to the practitioner who wishes to make use of the social skills literature in working with an exceptional child population (Asher, Markell and Hymel 1981; Conger and Keane 1981; Urbain and Kendall 1980; Van Hasselt et al. 1979).

Rationale for Individualized Social Competence Programming for Exceptional Children

As already discussed, many theorists consider social competence a multidimensional ability involving perceptual, cognitive and motor skills. Though these sub-skills are conceived as parts of an integrated social interaction process, the social skills training programs developed to date deal with selected sub-skills in isolation. Although the overwhelming majority of the previous research in social skills training has been conducted with subjects from regular classrooms and preschools, there is some evidence that exceptional children can profit from training in these sub-skills (Chandler, Greenspan and Barenboim 1974; Ferguson, cited in Urbain and Kendall 1980; Giebink, Stover and Fahl 1968; Goldstein 1972; Goldstein, Sherman, Gershaw, Sprafkin and Glick 1978; Jaquette 1980; Robin, Schneider and Dolnick 1976; Sarason and Ganzer 1973).

There have been few efforts to develop comprehensive, multi-faceted intervention procedures to improve social competence. Because we have been too narrow in our focus, we may be sacrificing much of our potential to assist children in their peer interactions. This seems particularly applicable to social competence interventions with children who have learning, behavioural and emotional problems. They have been found to have more severe deficits in the perceptual, cognitive and linguistic prerequisites of effective peer interaction (Bryan 1978; Camp 1979; Kahn 1969; Wiig and Harris 1976; Wong and Wong 1980). The routinized, cursory presentations of these skills contained in many of the existing programs are probably insufficient to meaningfully help a child with deep-seated difficulties in these areas. Studies have shown that deficiencies in some of the prerequisite social skills are related to global handicaps. For example, learning disabled children who show specific difficulties in recognizing the emotions conveyed by facial expressions tend to have difficulty with the perception of other visual stimuli, such as those used in the Block Design and Object Assembly subtests of the Wechsler scales (Wiig and Harris 1974). In social skills programming, these children probably need assiduous attention in this area.

In most of the existing programs, all children go through all of the steps in the procedure, regardless of individual strengths, deficits, previous learning, developmental level or learning style. This probably results in highly inefficient use of intervention time, and is inconsistent with prevailing theory and practice in programming for children with behavioural and learning exceptionalities. As awareness of the heterogeneous nature of exceptional children increases along with concern for their social competence, techniques for the individualized correction of social skills deficits will be needed.

Previously, a practitioner who wished to attempt a multidimensional, individualized intervention in this area would face several obstacles. One would have to use excerpts from many different programs, each of which was designed to be an integrated package and is probably most useful as such. The excerpts would not provide sufficient depth in the specific skill targeted for the child in question. Furthermore, the different programs would give sharply conflicting instructions for dealing with the same problem. The individualized programming procedure discussed hereafter was designed to alleviate these difficulties.

II

Selection of Target Skills

The IISC program was conceptualized as a flexible, individualized procedure that would allow different target behaviours for different children. However, the scope of behaviours encompassed in existing social skills training literature was so wide that some selection of skills had to be made. We first hoped to develop an exhaustive skills "menu" from which the individual components could be selected at will and combined into an entirely personalized intervention package, but delivery of such a package was logistically impossible unless the training sessions were conducted strictly on a one-to-one basis. We wanted to conduct the training in small groups, as this would allow for some social interaction within the groups which could serve as a valuable adjunct to the purely didactic aspects of the training. As well, schools and centres which will hopefully make use of the IISC program will likely find the small-group format more suitable. Therefore, we explored the possibility of having small groups in session throughout the week, with a particular target behaviour being taught at specified times. This would have required the children to come to the social skills training room at the particular times when the skills prescribed for them were taught. This organization was rejected because it was administratively chaotic. The children's school schedules as well as those of their classes would have been disrupted constantly by the going to and the coming from the training. Even if this was acceptable to the Child Study Centre, the resultant program would be of little use to most schools and treatment settings.

The most viable solution was to organize the skills into clusters that could serve as a common denominator in group formation. We wanted this clustering to have an empirical as well as conceptual basis; and since one of the criteria for inclusion of a skill in the program was that it had to relate to peer acceptance, we elected to systematically explore the patterns of peer acceptance at the Child Study Centre -- well aware that the skills that lead to peer acceptance in a treatment centre may be different from the skills of well-liked children in regular schools.

Acceptance by peers was measured using the Likeability scale of Pekarik's Pupil Evaluation Inventory (PEI; Pekarik, Prinz, Liebert, Weintraub and Neale 1976). This instrument is used for ratings of children by their peers. The PEI contains 35 items, which load on three factors: Aggression (20 items, such as "Who starts fights over nothing?"), Withdrawal (nine items, such as "Who isn't noticed very much?") and Likeability (five items, such as "Who is especially nice?"). The PEI was administered individually; subjects were asked to select from among their peers, whose pictures appeared in a photograph album in front of them, those children who best fit the description of the item in question. The results[1] indicate that the correlates of being rated as likeable were very different in each of the two years of the

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1. Details of these analyses are available from the authors upon request.

study. In the first year the more aggressive youngsters were rated as likeable, those who tended to play more by themselves were rated as least likeable. In the second year the more aggressive children were rated as less likeable, especially those whose aggression was in retaliation to some sort of provocation; the correlations between isolated behaviour and likeability were not significant.

Closer examination of the Year 1 data revealed that a small number of older, attractive, athletic, aggressive boys received a very large number of ratings as most likeable; by Year 2, these boys had been reintegrated into community schools.

Our team decided that control of aggression should be one intervention target. This decision was taken on the basis of the similarity of our Year 2 findings to most other studies of peer acceptance patterns. In addition, this target would not be inappropriate if, as our Year 1 data indicate, emotionally disturbed children tend, under certain circumstances, to "identify with the aggressor."

Specific target skills within the Coping with Conflict sequence were suggested by available data. The less accepted pupils seemed to react aggressively in difficult situations; they did not seem to be hostile initiators of aggression. Peers, then, seem to value non-aggressive resolution of difficulties. Discussion with teachers regarding disciplinary infractions over a two-week period at the Child Study Centre suggested specific targets for intervention: coping with teasing, coping with the anger and, the aggression of others, and accepting differences and frustrations. These became the component modules of the Coping with Conflict sequence. The specific behavioural objectives of this sequence are presented in Table 2.1.

Our findings regarding the relation between withdrawal and peer acceptance at the Child Study Centre were, again, not entirely consistent. We again decided to consider these data together within the general trend of research and theory regarding children's popularity patterns. Thus, skills to be used in approaching others, joining games, maintaining conversation, etc., became the second major cluster of skills in the program; this cluster will be referred to as the Forming Friendships sequence. Our survey of the literature suggested a valuable cognitive skill that should accompany the teaching of these more observable behaviours -- the ability to cope with rejection. This seems imperative as it has been established that popular peers may rebuff even an entirely appropriate greeting from an already unpopular classmate. The specific objectives of the Forming Friendships sequence are presented in Table 2.1.

Table 2.1

BEHAVIOURAL OBJECTIVES OF THE IISC MODULES

COPING WITH CONFLICT SEQUENCE

Coping with Teasing

1. Given a hypothetical situation in which the protagonist is teased, the child will state at least three ways of handling the situation, including at least one appropriate solution.

2. Given a hypothetical situation in which the protagonist is teased and asked what is the best response in the situation, the child will indicate a non-aggressive response.

3. Given a hypothetical situation in which the protagonist is teased, the child will accurately state the likely consequences of any aggressive solution suggested.

4. Given a hypothetical situation in which the protagonist is teased, the child will state in any sequence at least three of the skill steps which could be used in implementing an appropriate solution.

5. When presented on videotape a role-play situation in which the protagonist is teased, the child will role-play a non-aggressive response.

6. When presented on videotape a role-play situation in which the protagonist is teased, the child will role-play a response in which at least three appropriate skill steps are included.

Dealing with Aggression from Peers

7. Given a hypothetical situation in which the protagonist experiences physical aggression by a peer, the child will state at least three ways of handling the situation including at least one appropriate response.

8. Given a hypothetical situation in which the protagonist experiences physical aggression by a peer and asked what is the best response in the situation, the child will indicate a non-aggressive response.

9. Given a hypothetical situation in which the protagonist experiences aggression by a peer, the child will accurately state the likely consequences of any aggressive solution suggested.

10. Given a hypothetical situation in which the protagonist experiences aggression by a peer, the child will state in any sequence at least three of the skill steps which could be used in implementing an appropriate solution.

11. When presented on videotape a role-play situation in which the protagonist experiences physical aggression by a peer, the child will role-play a non-aggressive response.

12. When presented on videotape a role-play situation in which the protagonist experiences physical aggression by a peer, the child will role-play a response in which at least three appropriate skill steps are included.

Dealing with the Anger of Others

13. Given a stimulus picture in which the protagonist's face conveys anger, the child will identify the anger when asked, "How is this person feeling?"

14. Given a hypothetical situation in which someone is angry at the protagonist, child will state at least three ways of handling the situation, including at least one appropriate solution.

15. Given a hypothetical situation in which someone is angry at the protagonist, the child will indicate a non-aggressive response when asked, "What is the best response in the situation?"

16. Given a hypothetical situation in which someone is angry at the protagonist, the child will accurately state the likely consequences of any aggressive solution suggested.

Accepting Differences and Frustrations

17. Given a hypothetical situation in which the protagonist overreacts to a frustrating situation, the child will answer the question: "What thinking mistake is being made by X?" with an answer indicative of overreaction.

FORMING FRIENDSHIPS SEQUENCE

Greeting Others

18. When given a hypothetical situation in which the protagonist wishes to say "hello" to another child, the child will identify at least three of the appropriate skill steps.

19. Given a videotape of a role-play in which the protagonist wishes to greet another child, the child will implement a role-play response which exhibits a well-timed approach to the other child.

20. In a two-minute videotaped discussion with another child on an everyday topic, the child will maintain appropriate eye contact for at least 60 per cent of the time.

21. In a two-minute videotaped discussion with another child on an everyday topic, the child will participate appropriately, as evidenced by his/her talking for no more than 30 per cent more or 30 per cent less time than his/her partner.

22. In a two-minute videotaped discussion with another child on an everyday topic, the child will effect a change of speaker at least once without interrupting the partner.

23. In a two-minute videotaped discussion with another child on an everyday topic, the child will demonstrate logical continuity from the partner's remarks in at least 80 per cent of his/her interventions.

24. In a two-minute videotaped discussion with another child on an everyday topic, the child will demonstrate gestures, voice tones, etc., during the partner's responses which indicate listening to the partner's conversation.

Expressing Dislike

25. Given a role-play situation on videotape in which the child does not like the suggestion made by another child for a group activity, the child will role-play a response which includes some effort at enhancing the partner.

26. Given a role-play situation on videotape in which the child does not like the suggestion made by another child for a group activity, the child will role-play a response in which the protagonist's dislike is stated politely.

Refusing Unreasonable Requests

27. Given a hypothetical situation in which the protagonist is asked to get into trouble for another child, and asked to specify the best response, the child will specify a non-compliant but non-hostile response.

28. Given a role-play situation on videotape in which the protagonist is asked to get into trouble for another child, and asked to specify the best response, the child will role-play a non-compliant but non-hostile response.

Coping with Failure and Rejection

29. Given a story in which the protagonist is rejected after approaching appropriately a group of popular children and is distraught because of this, the child will answer the question: "What thinking mistake is being made by X?" with an answer indicative of the protagonist's excessive expectations or overreaction.

With regard to social perception and role-taking skills, careful examination of the developmental literature suggested that most of our target population should already have mastered the basic prerequisite skills we envisioned for the program. However, where the skills are not mastered, this should constitute an obstacle to effective social functioning. The data essentially supported these contentions.[2] The perception of facial features was measured by the Recognition of Children's Facial Expressions test (Wilchesky 1980). Basic role-taking was measured by Oppenheimer's emotional perspective-taking task (Oppenheimer 1978). In both cases, very few of the children at the Child Study Centre were deficient at these tasks. However, those who had difficulty with either task tended to be among those rated as least likeable by their peers. Therefore, these two skill areas were included as intervention sequences. It should also be noted that the writing team responsible for the preparation of the procedures manual felt that these skills were necessary for proper comprehension of the Coping with Conflict sequence or the Approach sequence.

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2. Details of these analyses are available from the authors upon request.

III

Description of the IISC Program

In order to efficiently individualize our social skills training, four skill clusters were developed. As depicted in Table 3.1, they were: I. Social Perception, II. Social Cognition, III. Coping with Conflict and IV. Forming Friendships. The skill modules specific to each sequence are also listed.

Table 3.1

COMPONENT MODULES OF IISC SEQUENCES

Sequence I. Social Perception
1. Visual perception of emotional cues
2. Vocabulary to describe emotions

Sequence II. Social Cognition
1. Role-taking

Sequence III. Coping with Conflict
1. Coping with teasing
2. Dealing with aggression from peers
3. Dealing with the anger of others
4. Accepting differences and frustrations

Sequence IV. Forming Friendships
1. Greeting others
2. Making conversation
3. Expressing dislike
4. Refusing unreasonable requests
5. Coping with failure and rejection

The determination of the needs profile of the individual children employed two sources of data: 1) the ROCFE and emotional perspective-taking tests, and 2) direct observation of the children's recess play. Table 3.2 summarizes the identification criteria that were used. The supplementary Social Perception and Role-taking sequences were taught before the two main sequences to 10 children. The supplementary sessions spanned a two-week period. Only three of these required training in both prerequisite skills.

Table 3.2

IDENTIFICATION CRITERIA

Sequence	Criterion
Social Perception	Score one deviation below mean for normal subjects on ROCFE test
Role-taking	Score two years below chronological age on emotional perspective-taking task
Coping with Conflict	More than one incident of aggression coded during systematic observation of recess play
Forming Friendships	Coded by observers of recess play as playing alone one standard deviation above Child Study Centre average.

The Coping with Conflict and Forming Friendships sequences were taught next. A number of children met the criteria for both sequences. It was impossible to include them in both groups, since this would entail extensive intrusion into other vital aspects of their school program. Therefore, these subjects were assigned to the sequence whose need appeared most confirmed by teacher ratings obtained on Stephens' Social Behavior Assessment.

Detailed session-by-session descriptions of the procedures used are contained in a separate procedures manual. The Social Perception and Role-taking sequences drew heavily upon published instructional materials. The Coping with Conflict sequence made extensive use of new materials of two types: 1) problem-solving lessons (alternative solutions, consequential thinking, means-end thinking -- see chapter 1) specific to the skill objectives of these modules and 2) two-minute taped vignettes showing how popular children cope with the situations under study.[3] These modeling tapes were excerpts of filmed interaction of regular class children who were rated as highly likeable by their classmates. As indicated in the procedures manual, these modeling tapes served as the basis for role-play practice with videotaped feedback. The Forming Friendships sequence used fewer problem-solving techniques. The modeling tapes prepared for this sequence were the major instructional content. Games, records and filmstrips were used as supplementary materials in all four sequences.

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3. The assistance of the Ottawa YMCA and the Carleton Roman Catholic Separate School Board is gratefully acknowledged. Certain procedures worked best for older or younger subjects; these are indicated in the procedures manual.

The IISC procedures were implemented over a twelve-week period. Training was conducted twice a week in groups of two, three or four. Each session was of 40 minutes duration. Separate groups were conducted in English and French. The therapists found that group sizes of three or four were preferable to groups of two, because within-group interaction could be used as instructional examples.

The sessions were co-led by male and female therapists who had masters-level training in psychology. The children generally related well to the procedures and to the therapists. The children's general co-operation and motivation seemed about the same as for the other parts of their school program. A token reinforcement/response cost program was used as an adjunct and appeared quite successful. Group participation and co-operation increased markedly as the program continued. The therapists found that the program was best accepted when viewed by all as an integral part of the school routine.

IV

Evaluation Results

A randomized block design was utilized in evaluating the benefits of the IISC program. Based on observations of their activity during recess and after lunch recreation, the subjects were classified as aggressive, withdrawn or intermediate. Within each of these classifications, the children were randomly assigned to two groups. Group 1 received the IISC program as described above. Compliance with the procedures was verified by independent observers, who rated 96.7 per cent of the utterances of four sessions selected at random as in concordance with the manual. Group 2 received an equivalent number of sessions of systematic relaxation training in groups of three measures of social competence obtained before and after the treatment period. These measures are: ratings of direct observation of aspects of interpersonal behaviour, teacher ratings of social skill, and a self-report locus of control measure. The teacher checklist was readministered seven months after treatment to assess the maintenance of the effects of the program. Most of these were completed by teachers in community schools after the subjects were discharged from treatment.

Subjects

The subjects were 41 children (32 boys and 9 girls) ranging in age from 7 through 13 years; the mean age was 10.5 years. All were receiving treatment at the Child Study Centre, University of Ottawa. Fifteen of the subjects were in residential care; the remainder were in attendance for the full school days plus additional family or individual therapy sessions. The vast majority were diagnosed as suffering from conduct disorders or attention deficit disorders.

Instruments

Child Study Centre Observation Code

The subjects were observed in random order for two-minute samples during morning recess and after-lunch free play periods. Behaviours which occurred concurrently with the end of a five-second observation interval were coded during a subsequent five-second period. Each subject was observed during both the pre-test and post-test sessions, for a total of 20 minutes, exclusive of five-second coding intervals. Two types of categories were coded: association categories (which specified whom the child was with at the end of the interval: alone, peer or adult), and activity categories (which specified what the child was doing: unoccupied, motor, watching, vocal, touching, aggression-initiated, aggression-returned, "rough and tumble", co-operating, approaching and leaving). Operational definitions were formulated for each category.

Eight undergraduate student observers were trained for three weeks until inter-observer reliability surpassed 80 per cent for all coded categories. Observers were rotated during reliability checks so that the same two observers would not be paired each time a reliability check was scheduled. This was done to minimize observer drift. Reliability checks were conducted randomly on 10 per cent of the total observations and an agreement percentage was calculated on an interval-by-interval basis using the following formula:

$$\text{Agreement} = \frac{\text{Number of agreements}}{\text{Number of agreements + number of disagreements}} \times 100$$

Reliabilities above 80 per cent on all categories were maintained during the eight weeks of observations before and after the IISC interventions.

Teacher Rating Scale: Social Behavior Assessment

The original Social Behavior Assessment (SBA; Stephens 1979) is a 136-item teacher rating scale which has been widely used as a measure of social competence. The conceptual structure of the SBA clusters these skills into four behavioral domains: environmental, interpersonal, task-related and self-related. Stephens and his colleagues have demonstrated impressive test-retest reliability and discriminant validity for the original instrument.

Byrne and Schneider (1985) conducted a factorial analysis of the SBA. This study, based on the ratings of 301 normal elementary school children, yielded five factors: Social Participation/Conversation, Academic Responsibility, Self-control, Consideration for Others, and Lunchroom Behavior. Because of the low frequency of ratings on the fifth factor (Lunchroom Behavior) only the first four were retained as dependent measures in this study. By eliminating items that had weaker loadings on the four factors, those which yielded little variability or which were frequently not rated by the teachers, a shorter scale of 70 items was developed and used as a dependent variable.

Locus of Control Scale

Locus of control refers to the nature of the attributions one makes to the determinants of success and failure in one's life (Lefcourt 1982; Nowicki and Strickland 1973). Research conducted with different samples of children and adolescents has established a positive relationship between an internal locus of control (i.e. believing that one's own outcomes are the results of one's own efforts) and many aspects of effective interpersonal functioning.

Locus of control was measured with the abbreviated version of the Nowicki-Strickland Locus of Control Scale. This is a pencil-and-paper measure consisting of 20 items to be answered yes or no. Its internal consistency, test-retest reliability, and construct validity have been well established (Nowicki and Strickland 1973). The questionnaire was administered to the subjects as a group in their classroom setting. The items were read aloud to children who had difficulty in reading.

Results

Attainment of Behavioural Objectives

The attainment of the behavioural objectives specified in chapter 2 is summarized in Table 4.1. These results are based on two-session post-intervention testing conducted independently by two research assistants using story situations with which the subjects were not previously familiar. As indicated, the overwhelming majority of the stated objectives were mastered to criterion.

Table 4.1

ATTAINMENT OF BEHAVIOURAL OBJECTIVES

Module	Number of subjects	Percentage of objectives mastered to criterion
Coping with teasing	13	89
Coping with the aggression of others	13	84
Coping with the anger of others	13	96
Accepting differences and frustrations	13	70
Greeting others	9	92
Maintaining conversation	9	72
Expressing dislike	9	70
Accepting defeat and rejection	9	100

Transfer of Training

Direct observations. The results obtained on the relevant observation categories are displayed in Tables 4.2 through 4.5. As indicated, both treatment and control groups showed considerable improvement on all observational categories. Incremental gain in favour of the experimental (IISC) group was obtained only for aggression.

Table 4.2

OBSERVATION RESULTS: AGGRESSION (INITIATED AND RETURNED)

		Pre	Post
EXPERIMENTAL	M	3.35	0.45
	SD	(4.50)	(0.88)
CONTROL	M	2.95	1.42
	SD	(3.43)	(1.75)

$F = 5.00$

$p < .05$

Table 4.3

OBSERVATION RESULTS: CO-OPERATION

		Pre	Post
EXPERIMENTAL	M	32.6	58.5
	SD	(23.6)	(49.5)
CONTROL	M	33.6	59.6
	SD	(28.7)	(52.0)

F = 0.002

NS

Table 4.4

OBSERVATION RESULTS: PEER

		Pre	Post
EXPERIMENTAL	M	121.4	153.1
	SD	(42.4)	(43.5)
CONTROL	M	133.15	164.0
	SD	(44.4)	(49.8)

F = 0.187

NS

Table 4.5

OBSERVATION RESULTS: APPROACH

		Pre	Post
EXPERIMENTAL	M	12.3	3.5
	SD	(3.5)	(2.1)
CONTROL	M	13.5	3.2
	SD	(6.2)	(3.0)

F = 0.148

NS

Teacher ratings. Results of the analysis of the teacher ratings appear in Tables 4.6 through 4.9. (Remember that higher scores indicate greater maladjustment.) As shown, improvements for both experimental and control subjects on all four factors were slight. There were also no significant differences between the experimental and control groups.

Table 4.6.

SBA TEACHER RATING SCALE RESULTS: SOCIAL PARTICIPATION/CONVERSATION

EXPERIMENTAL	Pre	Post	Follow-up
M	34.05	32.47	30.23
SD	6.98	5.75	8.07
CONTROL			
M	33.52	30.53	31.16
SD	7.49	6.29	8.01

Hotellings $T^2 = 1.519$

NS

Table 4.7.

SBA TEACHER RATING SCALE RESULTS: ACADEMIC RESPONSIBILITY

EXPERIMENTAL	Pre	Post	Follow-up
M	29.53	26.95	28.66
SD	5.31	5.59	7.32
CONTROL			
M	29.37	27.32	29.05
SD	5.67	6.03	6.43

Hotellings $T^2 = 0.196$

NS

Table 4.8.

SBA TEACHER RATING SCALE RESULTS: SELF-CONTROL

EXPERIMENTAL	Pre	Post	Follow-up
M	25.38	24.42	23.57
SD	4.64	4.23	6.57
CONTROL			
M	24.73	24.65	22.42
SD	6.23	4.59	4.90

Hotelling's T^2 = 0.060
NS

Table 4.9.

SBA TEACHER RATING SCALE RESULTS: CONSIDERATION FOR OTHERS

EXPERIMENTAL	Pre	Post	Follow-up
	14.19	13.71	12.66
SD	2.11	2.57	4.23
CONTROL			
	13.47	12.36	12.84
SD	2.43	2.75	3.55

Hotelling's T^2 = 3.217
NS

Locus of control. Table 4.10 is a summary of the self-report locus of control results. For this measure alone, there were significant differences between the groups before treatment, the experimental subjects being more external (the groups were not matched on this variable). The experimental subjects did become slightly more internal after treatment, compared with virtually no change for the control subjects. This difference was not statistically significant.

Table 4.10

LOCUS OF CONTROL SCALE RESULTS

EXPERIMENTAL	Pre	Post
M	10.41	9.11
SD	3.61	3.07
CONTROL		
M	8.42	8.41
SD	3.88	3.27

F = 1.135
NS

Discussion

This preliminary evaluation of the IISC procedures indicates that the basic cognitive objectives of the program were essentially realized. Emotionally disturbed children who have received the procedures appeared to control their aggression more frequently than those in a control treatment group. The procedures do not appear to increase social interaction among the children any more than does a control condition.

The findings with regard to aggression should not be minimized since aggression is likely the most potent predictor of long-term psychological adjustment among our variables. Aggression has also been cited frequently as a major factor in alienating peers. As well, one should consider that the reduction in aggression achieved here was accomplished through the construction of positive alternatives and skills for conflict situations, without the use of any negative techniques.

The failure to induce greater social interaction than the control condition must be interpreted in light of the children's situation. Both experimental and control groups did experience marked improvements on these variables. This may mean that:

1) The relaxation training control somehow increases sustained social interaction;

2) The other treatments received by these children (e.g. family therapy, play therapy, behaviour modification) increase sustained social interaction; or

3) Sustained interaction among institutionalized disturbed children increases over the school year, independent of treatment.

Our team now believes that relaxation may be an important component in the training of children's social skills. The withdrawn subjects, particularly, tended to appear "frozen" and stiff as they practised the new skills involved in forming friendships. Relaxation exercises should not be used as a control-group condition in future evaluations.

Clear interpretation of these findings must wait until the IISC procedures are attempted in other settings where the subjects are referred basically for social skills training, and are not receiving other interventions.

The failure of the teacher ratings to corroborate the marked improvements for both experimental and control groups that were observed in the schoolyard indicates the need for further study of the teacher's perspective on children's social skills. Quite possibly, peer interaction within the classroom may not correspond with peer interaction patterns at recess. If this is the case, the teachers are rating behaviours entirely different from those we observed. Indeed, teacher training could be a valuable adjunct to individualized social skills training for emotionally disturbed children -- and perhaps the key to the transfer of the training.

V

Future Development of the IISC Program

This report is submitted as a description of the first step of what is hoped will become the ongoing development of the IISC program. As mentioned previously, this preliminary evaluation is limited in a number of ways -- by the small sample size, the relative inexperience of the therapists, the fact that the subjects were receiving other treatments at the same time. Therefore, it seems appropriate to conclude with a brief outline of directions for future research:

1. The program should be tried with emotionally disturbed children from regular schools who would receive only this intervention during the period of treatment.

2. The individualized IISC procedures should be compared with non-individualized social skills training; a cost-benefit analysis would be appropriate.

3. When administered to a larger sample, subsidiary analysis of the program's effects by age and sex should be performed.

4. Analysis of the effects of the separate modules and modalities within the program should be conducted.

5. A complementary teacher training package to enhance transfer of training should be developed and evaluated.

Hopefully, the program will, with further refinement, be useful to the teachers and therapists of pupils with adjustment problems elsewhere. We encourage them to continue this study as we shall.

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